



THUNDERBIRD

SCHOOL OF GLOBAL MANAGEMENT

From Science to the Market Place

By

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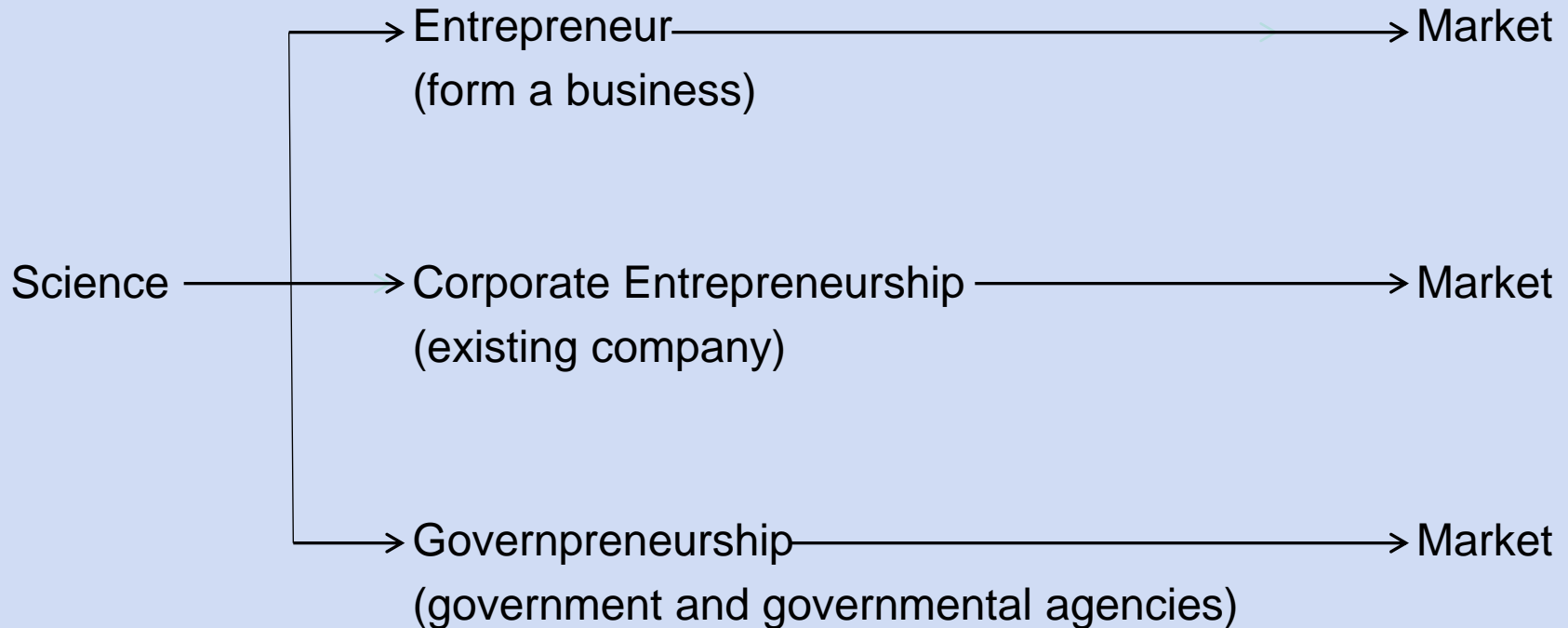
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Environmental Factors Affecting Organizations in This Millennium

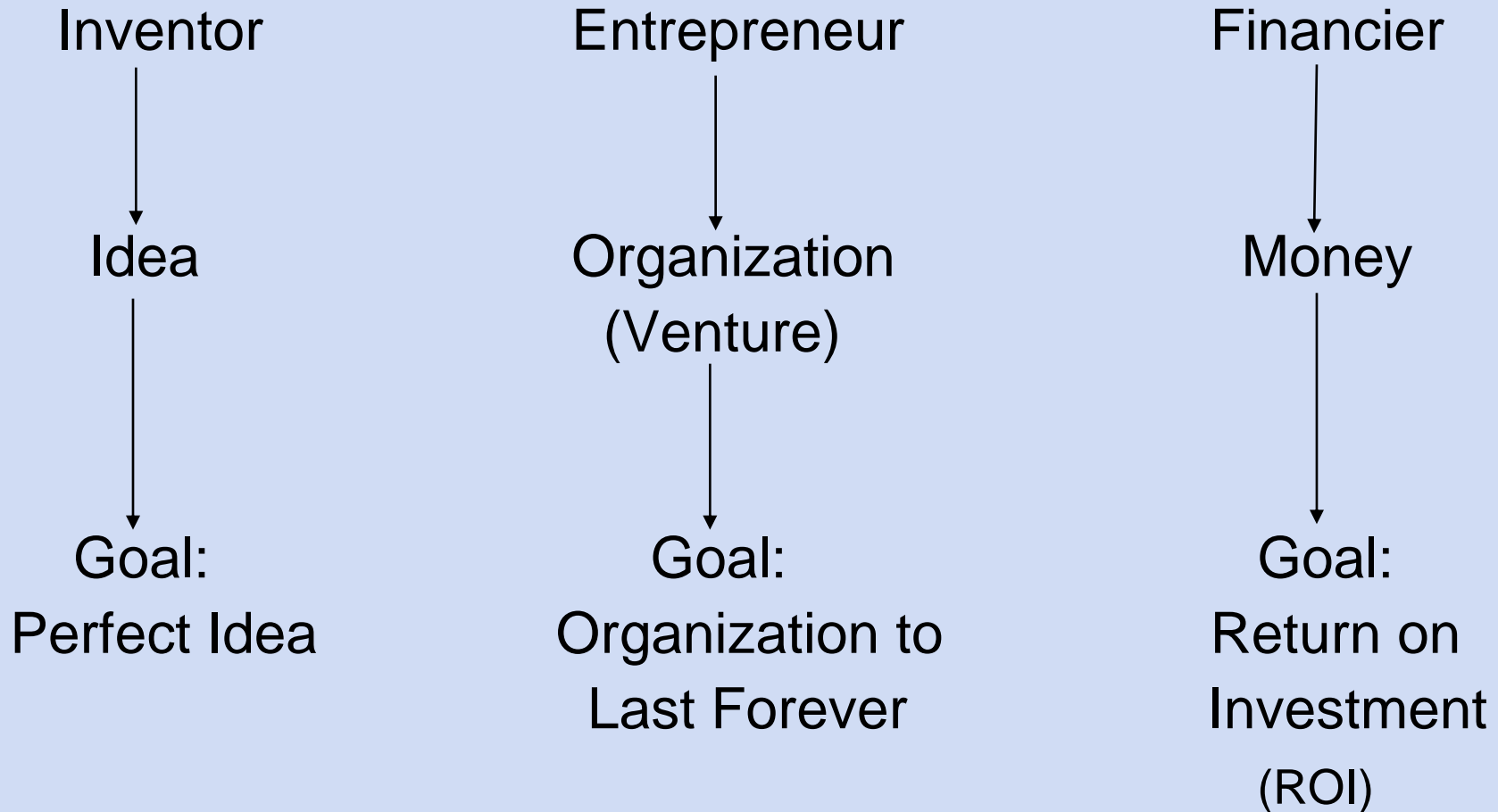
- Hypercompetition
- Rapidly changing technology
- Shorter product life cycles
 - a. Need new products
 - b. Need a sound new product launch system
- New market opportunities
- Different employee drives and motives
- Focus on obtaining sales and profits
- Sizeable amount of investment money available

Three Ways to Take Science to Market and Create Value



The Entrepreneur

Three Aspects of Technology Commercialization



Definitions

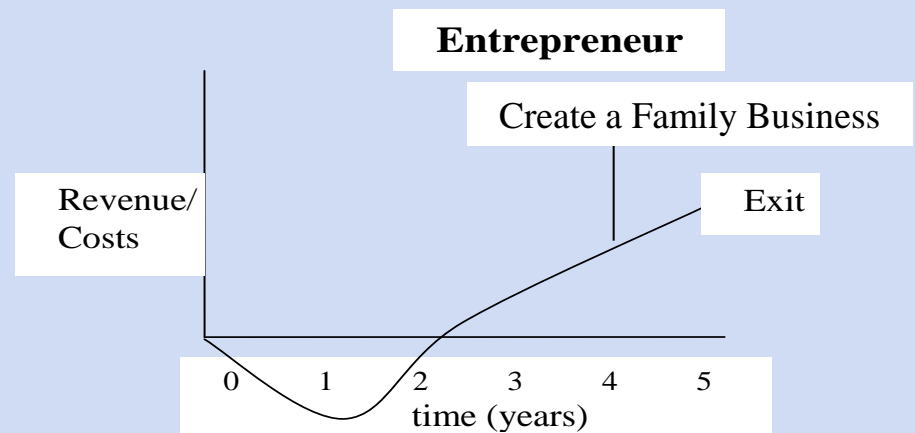
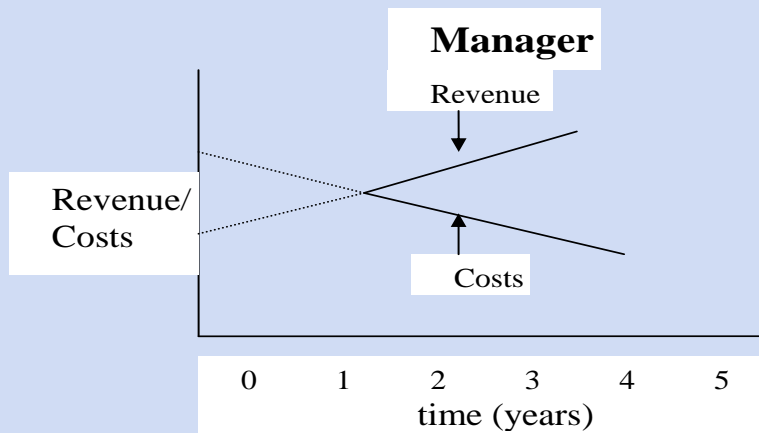
Entrepreneurship

- Entrepreneurship is the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence.
- If you ain't the lead dog, the scenery never changes.

Corporate Entrepreneurship

- Entrepreneurship in an existing organization.
- It is easier to beg forgiveness than to ask for permission.

Managerial vs. Entrepreneurial Decisions



Critical Risk Factors for Potential Investors

- The size of the market and its readiness to adopt the technology
- The competitive advantage of the firm and its ability to sustain that advantage
- The skills, experience, and track record of the management team
- The upside potential of the venture
- The downside potential of the venture
- An appropriate exit time for the investors
- The current state of the economy and the industry in which the venture will operate

Alternative Sources of Financing

Source of Financing	Length of Time		Cost				Control	
	Short-term	Long-term	Fixed Rate Debt	Floating Rate Debt	Percent of Profits	Equity	Covenants	Voting Rights
Self		X				X	X	X
Family and friends	X	X	X	X		X	X	X
Private equity funds		X				X	X	X
Angels (private investors)		X		X		X	X	X
Venture capital		X	X			X	X	
Government Programs		X						
a. Federal		X						
b. State		X						

Bank Loans

Bank Lending Decisions

- | | |
|--|---|
| <ul style="list-style-type: none">• Character• Capacity• Capital | <ul style="list-style-type: none">• Collateral• Conditions |
|--|---|

Types of Bank Loans

- | | |
|---|---|
| <ul style="list-style-type: none">• Accounts Receivable Loans• Equipment Loans• Inventory Loans• Real Estate Loans | <ul style="list-style-type: none">• Character Loans• Installment Loans• Long-term Loans• Straight Commercial Loans |
|---|---|

Private Equity Market (Enterprise Capital)

Individuals

- Individuals
- Angel Groups (networks)
- Angel Funds
- Family Offices

Venture Capital Firms

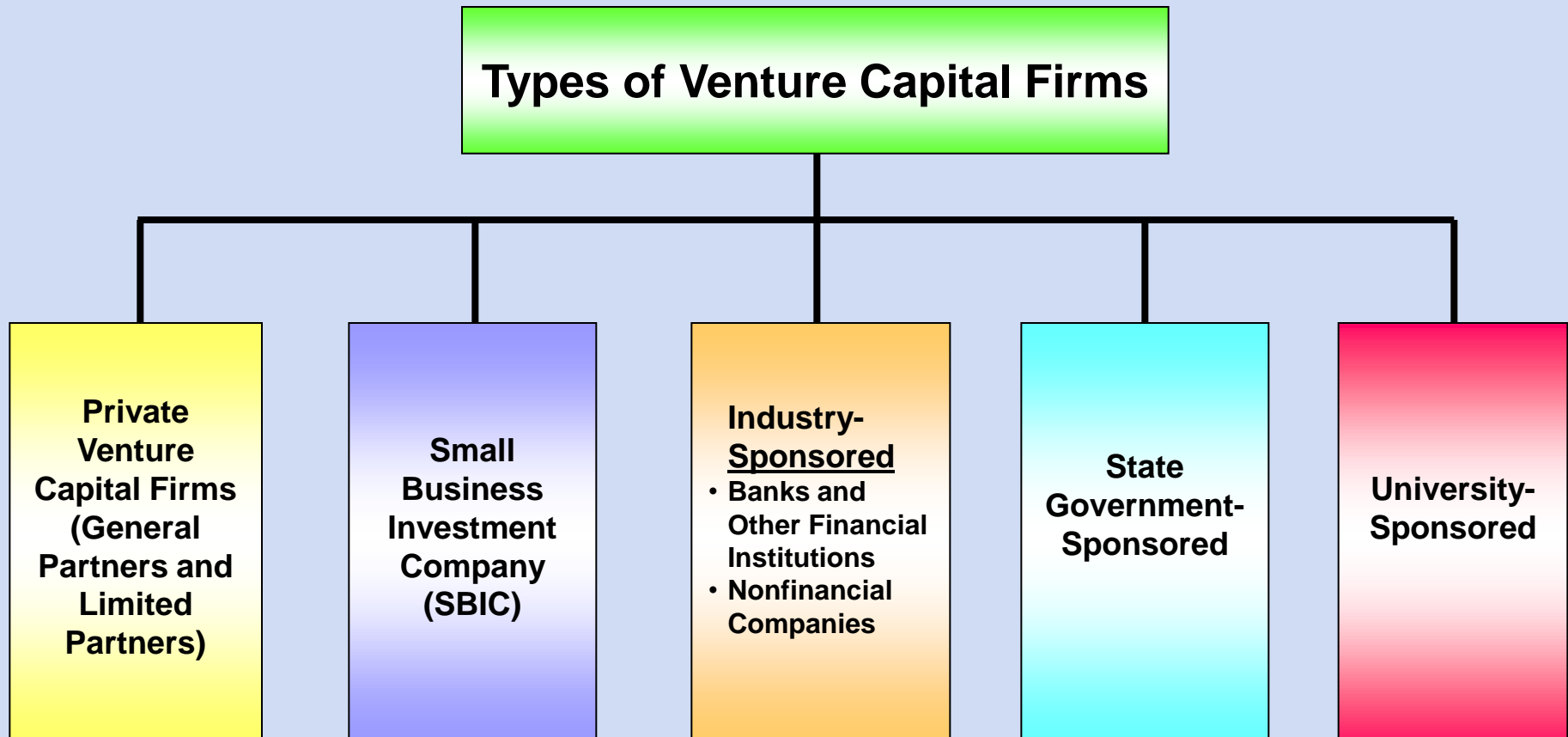
- Private Venture Capital Firms
- Small-Business Investment Companies (SBIC)
- Industry Sponsored Venture Capital Firms
 - Banks and other financial institutions
 - Nonfinancial companies
- Regionally Oriented Venture Capital Firms
- University Sponsored Venture Capital Firms

Private Equity Firms

- Limited Partners
- General Partners



Types of Venture Capital Firms



Corporate Entrepreneurship Formula

$$CE = CI + O + C^2$$

Where :

I = Level of Corporate Entrepreneurship

CI = Commitment to Innovation

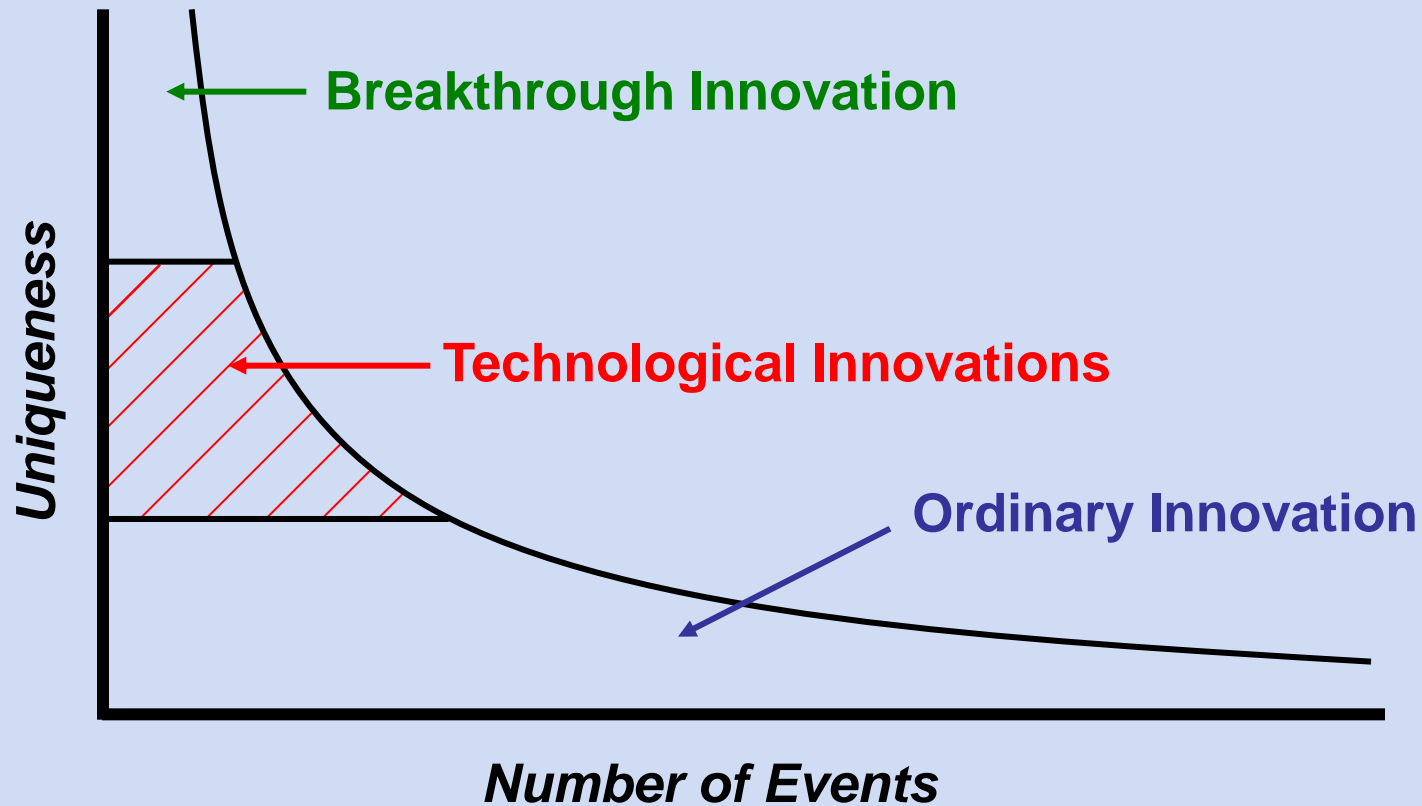
O = Ownership

C = Creativity

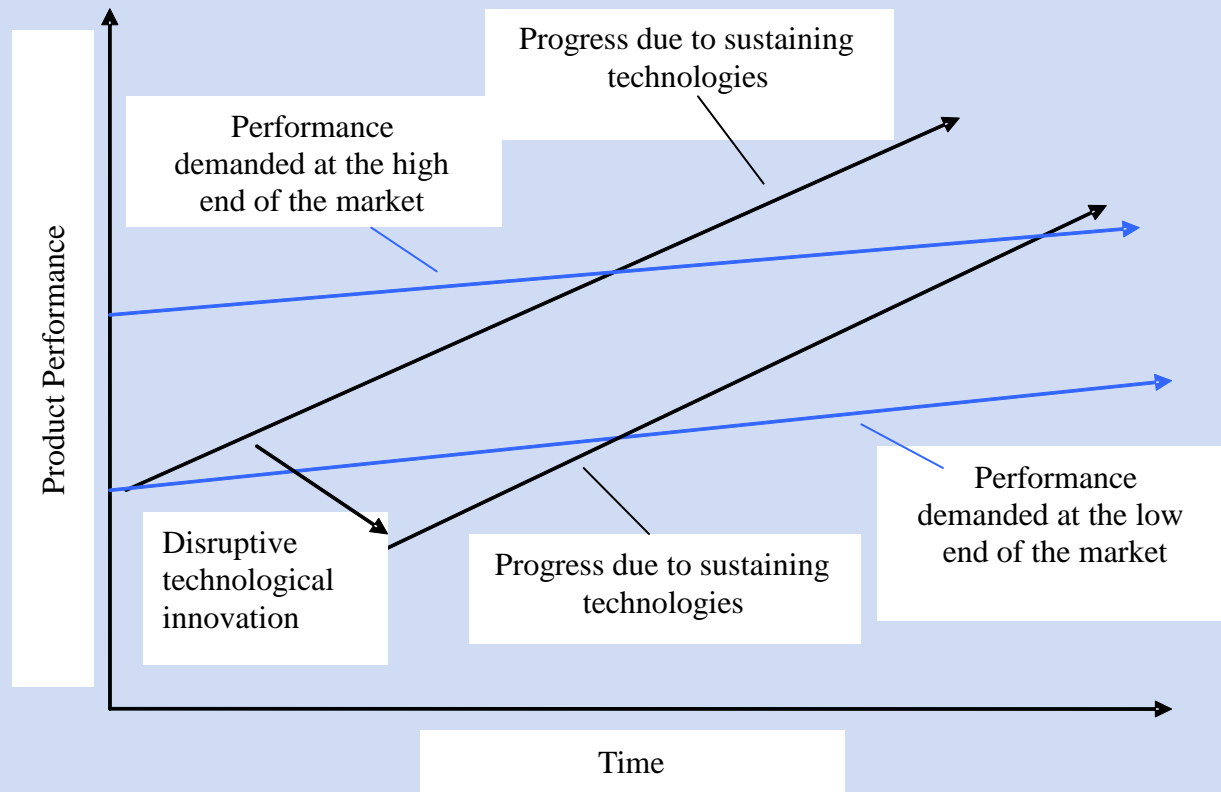
C = Change

I = Commitment to Innovation

Innovation Chart



The Impact of Sustaining and Disruptive Technological Change



6 Steps in Outcome Driven Innovation

Identify all customer needs and those needs unmet.



Determine the fundamental goal customers are trying to accomplish or problems they are trying to solve in a given situation. Goal of innovation is to help customers accomplish what they want better.



Determine where consumers struggle to accomplish what they want to accomplish; this requires measuring what needs to be done and helping to ensure the objective is accomplished with speed and predictability – these are the consumer's desired outcomes.



When a company wants to engage in market growth or discuss new market opportunities, it needs to uncover what tasks consumers are having trouble getting done.



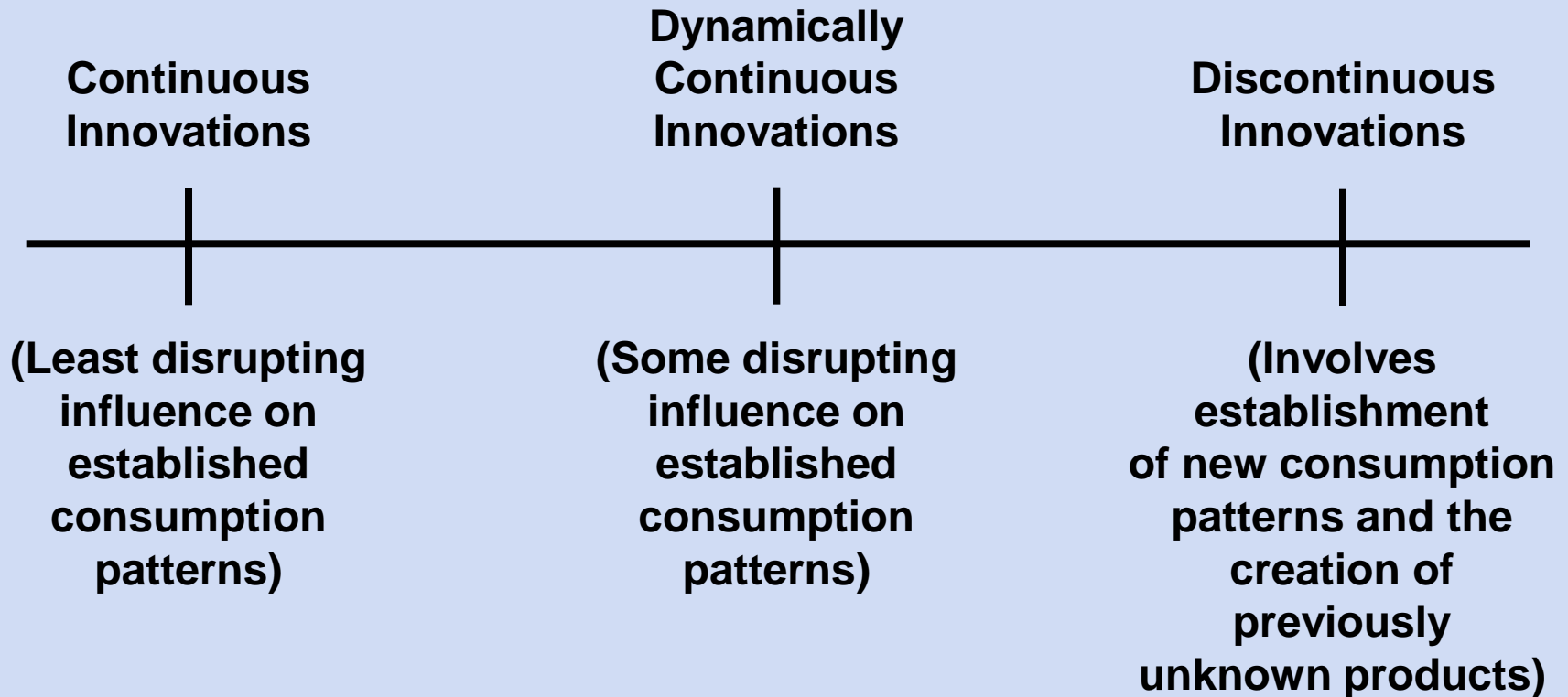
Determine what tasks are most important and least satisfied.

Opportunity = Importance + Max (Importance – Satisfaction, always greater than 0)



Use the consumer's unmet needs as basis to segment the market.

Continuum for Classifying New Products

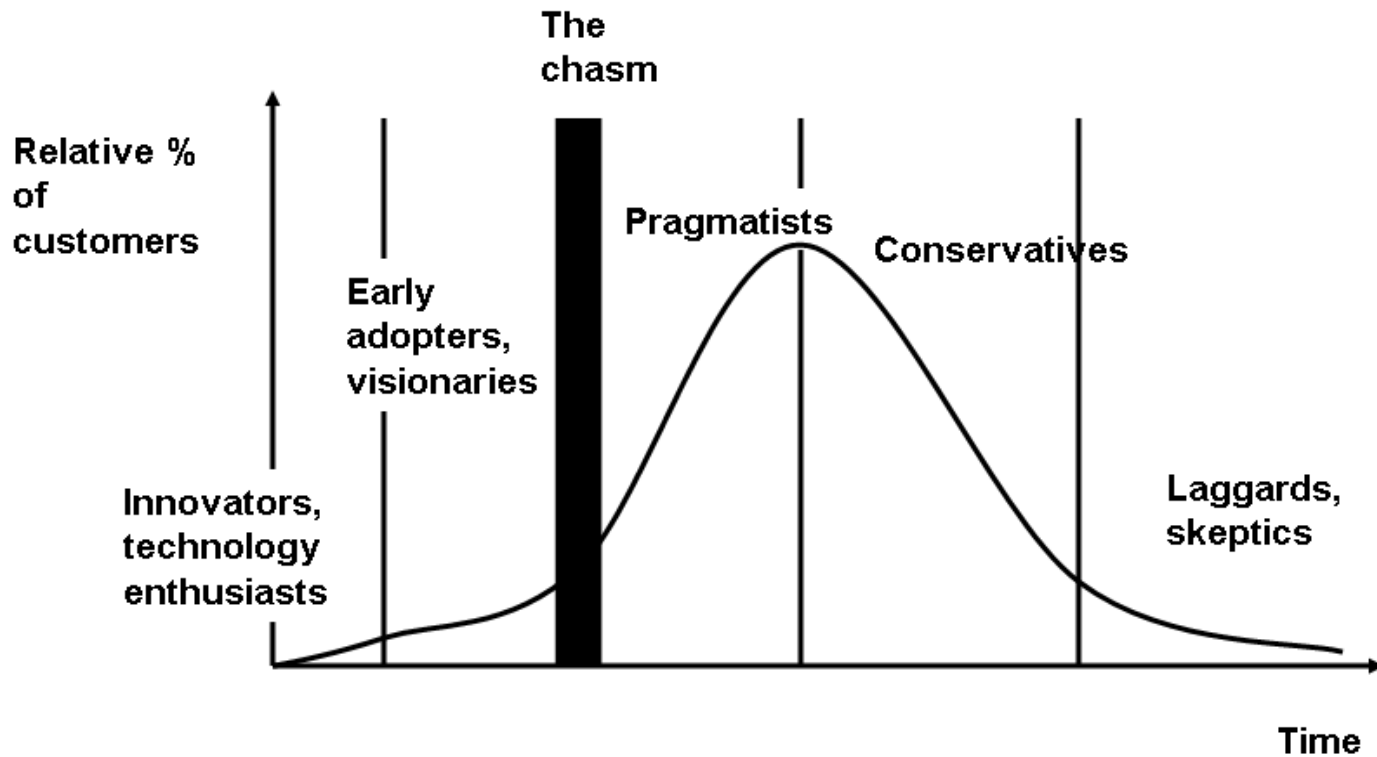


New Product Classification System

Market Newness ↓	Technology Newness →			
	Product Objectives	No Technological Change	Improved Technology	New Technology
	No market change		Reformation Change in formula or physical product to optimize costs and quality	Replacement Replace existing product with new one based on improved technology
	Strengthened market	Remerchandising Increase sales to existing customers	Improved product Improve product's utility to customers	Product life extension Add new similar products to line; serve more customers based on new technology
New market	New use Add new segments that can use present products	Market extension Add new segments modifying present products	Diversification Add new markets with new products developed from new technology	



The Adopter Chasm



O = Ownership of Position

Changing Cultural Values and Norms

<u>Traditional Organizational Culture</u>		<u>Corporate Entrepreneurial Climate</u>
Fragmentation	→	Wholeness 1, 2, 3, 4, 5, 6, 7
Instruction	→	Vision 1, 2, 3, 4, 5, 6, 7
Controlled	→	In control 1, 2, 3, 4, 5, 6, 7
Other-directed	→	Inner-directed 1, 2, 3, 4, 5, 6, 7
Alienation	→	Responsibility 1, 2, 3, 4, 5, 6, 7
“Chores”	→	Enthusiasm/motivation 1, 2, 3, 4, 5, 6, 7
Meticulously defined limits	→	Space/freedom 1, 2, 3, 4, 5, 6, 7
Interference	→	Trust 1, 2, 3, 4, 5, 6, 7
Distrust	→	Belief in people 1, 2, 3, 4, 5, 6, 7
Expendable	→	Expandable 1, 2, 3, 4, 5, 6, 7
Limiting people	→	Growing people 1, 2, 3, 4, 5, 6, 7

Characteristics of Two Cultures

Large Organization Climate

- Precise instructions...how...
- Punish the responsible (fail environment)
- Never make a mistake. Don't fail!
- Wait for instructions, orders
- Mind your own turf...check the borders...not my table!

Corporate Entrepreneurial Climate

- Sharing the visions and the goals
- Reward the accountable who took action (success environment)
- Always try something that might lead to a next step...
- Suggest, try experiment
- Consider the whole picture, feeling ownership and responsibility

C = Stimulating Creativity

Maintain Creativity in the Organization

Impediments to Creative Behavior

- Fear and anxiety
- Defensiveness
- Cultural inhibition

Organizational Hindrance of the Creative Process

- Stress on consequence of failure
- Organizational instability
- Excessive formalization of rules, policies, relationships, and procedures
- Highly centralized organizational structure
- Little time allocated for thinking and experimenting

Maintain Creativity in the Organization *(cont.)*

Creative Problem-Solving Techniques

- Brainstorming
- Reverse brainstorming
- Attribute listing
- Free association
- Collective notebook method
- Inspired big-dream approach
- Parameter analysis

C = Encouraging Change



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Nine Steps to Transforming Your Organization

1	Establish A Sense Of Urgency <ul style="list-style-type: none"> • Examining market and competitive realities • Identifying and discussing crises, potential crises, or opportunities • Develop appropriate guidelines for time frame • Implementation must be achievable within the existing scope of organizational resources
2	Forming A Powerful Guiding Coalition <ul style="list-style-type: none"> • Assembling a group with enough power to lead the change effort • Encouraging and allow the group to work together as a team • Organize a team of established leaders who can implement and obtain buy-in of others and also work toward organizational goals without blocking tasks with personal agendas
3	Creating A Vision Of End Result <ul style="list-style-type: none"> • Creating a vision to help direct the change effort • Developing a strategic plan (mission, goals/objectives, strategies/tactics) for achieving that vision
4	Communicating The Vision <ul style="list-style-type: none"> • Using every vehicle possible to communicate the new vision & Strategies • Teaching new behaviors by example of the guiding coalition • Measuring progress toward the end goal must be visible and continually communicated to all
5	Selecting A Champion <ul style="list-style-type: none"> • Selecting a champion that can spearhead the transformation • Champion needs to be able to communicate the vision in a powerful way
6	Empowering Others To Act On The Vision <ul style="list-style-type: none"> • Getting rid of obstacles to change • Changing systems that undermine the vision & discourage risk taking • Rewarding creative thinking & implementation at any level • Acknowledge that employees are the ones responsible for achieving success
7	Planning For And Creating Short-Term Wins <ul style="list-style-type: none"> • Planning for visible performance improvements • Recognizing and rewarding employees involved in the improvements with more than token rewards • Stair step achievements: Winning small battles to “win the war” • Build in accomplishments which lead to the end goal and reward those that add value to that achievement
8	Consolidating Improvements & Producing Still More Changes <ul style="list-style-type: none"> • Using increased credibility to change systems, structures and policies • Hiring, promoting, and developing employees who can implement the vision • Giving employees the opportunity to initiate changes
9	Institutionalizing New Approaches <ul style="list-style-type: none"> • Articulating the connections between new behaviors and success • Developing the means to ensure leadership development and succession • Standardizing the process for all future change initiatives

Adopted from: John P. Kotter, “Leading Change: Why Transformation Efforts Fail”, *Harvard Business Review* (March-April, 1995), pp. 59-62.

Implementing Corporate Entrepreneurship



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Barriers to Corporate Entrepreneurship in an Organization

- Inherent nature of large organizations
- Need to accomplish short-run objectives
- Lack of entrepreneurial talent
- Inappropriate compensation methods

Benefits of Corporate Entrepreneurship to Company (Employer)

- Establishing a new culture – better morale
- Reduction in employee turnover
- Motivated workforce
- New business concepts
- New ways of doing things
- More flexible organizational structure
- Organizational learning
- Positive impact on revenues and profits

Benefits of Corporate Entrepreneurship to Employee

- Feeling of self-achievement
- More job satisfaction
- Increased skills
- Financial and non-financial rewards
- Excited to come to work
- Able to be creative

Developing a Corporate Entrepreneurship Program

- Develop the vision and elements of program with key members of the management team
- Develop example(s) of the proposal to be submitted; establish the evaluation criteria, and determine the amount of money available
- Select members of evaluation committee
- Announce start of program with proposal submissions due in 4-6 weeks
- Select winning proposals
- Form venture teams
- Communicate results and provide information on program regularly internally throughout the company on a regular basis
- Implement and structure the corporate entrepreneurial activity and climate

Structure for Corporate Entrepreneurship

- Entire organization adopts corporate entrepreneurship. An organic structure is developed throughout the organization.
- Multidisciplinary “New Products Division” is formally established at vice-presidential level to shepherd new products and encourage others in the organization.
- “New Products Subsidiary” is established with autonomous structure. The unit accepts proposals from individuals, evaluates them, and determines whether the proposal is worth funding or not.
- An autonomous venture capital company is formed to underwrite and assist either internal or external proposals that meet normal venture capital criteria.
- A section within the human resources department is established to train or send managers to corporate entrepreneurship conferences.

Characteristics of a Corporate Entrepreneurial Leader

- Help people feel that they are important parts of a whole
- Assume that all human beings have the capacity for excellence and growth
- Undo the damage of employees feeling undervalued and under-appreciated
- Emphasize the rewards of self-motivation and self-improvement through work
- Establish a vision that empowers caring for the people and the product
- Combine the goals of the organization with the goals of the people in it
- Help employees learn how to manage change
- Demonstrate that new ways of doing things are workable
- Encourage new ways of doing things
- Manage by walking around (MBWA)
- Keep the bureaucrats out of the way of productive people
- Fail their way to success
- Develop a well-orchestrated purposeful disorganization

Criteria for Evaluating Corporate Entrepreneurship Proposals

- High corporate fit
- Low initial investment
- Experienced venture champion
- Experience with product/service
- Low competitive threat
- Proprietary technology
- High gross margin
- High rate of return

Examples of Creative Approaches to Rewarding Entrepreneurial Behavior of Employees

- Employees put a percentage of their salary at risk and then can either lose it, double it, or triple it based on team performance.
- Personalized “innovator” jackets, shirts, and leather folders are given to employees who make entrepreneurial contributions.
- When a new idea is accepted by the firm, the CEO awards shares of stock to the employee.
- Employees are given \$500 to spend on an innovative idea that relates to their job.
- A firm rents out a major sports stadium, fills the stands with employees, families, and friends, and then has innovation champions run onto the field as their name and achievement appears on the scoreboard.
- A company sets targets, and then 30 percent of incremental earnings above target are placed into a bonus pool that is paid out based on each employee’s performance rating.

Examples of Creative Approaches to Rewarding Entrepreneurial Behavior of Employees *(cont.)*

- Small cash awards are given to employees who try something new and fail – and the best failure of the quarter receives a larger sum.
- Some companies have point systems where employees receive differing amounts of points for different categories of innovation contributions. Points are redeemable for computers, merchandise, free daycare, tuition reimbursement, and other types of rewards.
- A parking spot is reserved for the “innovator of the month.”
- Team members working on a major innovation are awarded shares of zero value at project outset, and as milestones are achieved (on time) predetermined values are added to the shares. Milestones not achieved lead to a decline in share value.
- Another firm ties cash awards for employees to a portfolio of innovation activities produced over time, including ideas generated, patents applied for, prototypes developed, and so forth.

Examples of Creative Approaches to Rewarding Entrepreneurial Behavior of Employees *(cont.)*

- Employees receive recognition for innovative suggestions, and then a drawing is held at the end of the year of all accepted suggestions, with the winner receiving a sizeable financial reward.
- One firm has a “frequent innovator” program that works like an airline frequent flier program.
- “Hero biographies” are written about an employee, his/her background, and an innovation that he/she has championed. The stories are full of praise and a little humor.
- One firm provides gift certificates within a day of an employee idea being implemented, and another takes employees to a “treasure box” where they can choose from among a number of gifts.
- A company gives 15 percent of out-of-pocket savings achieved by their ideas in the first two years of use and, if the idea is for a product, 3 percent of first-year sales.

Examples of Creative Approaches to Rewarding Entrepreneurial Behavior of Employees *(cont.)*

- The top performing team in terms of innovation is sent to a resort for a week.
- A company gives a savings bond to the employee who raises the most challenging question in management meetings.
- One organization has \$500 on-the-spot awards for anyone showing special initiative.
- Firms have their own Olympics, rodeos, competitions, game shows, hit parades, and murder mysteries in an attempt to recognize initiative and excellence.
- Others have praise and recognition boards, threshold performance clubs, atta-person awards, and some allow innovators to appear in company advertisements.